

and effects are downloaded from some other location onto the device, either wirelessly or via a hardwired connection, by and upon selection thereof.

In another embodiment, the first soundtrack is selected to play for a first time interval, and another soundtrack is selected to play for a second time interval different than the first time interval. The time intervals of the soundtracks may be overlapping or separate.

In one embodiment, the soundtracks play throughout the full interval of the audio mix, unless specified otherwise. In one embodiment, the time interval is determined when the soundtrack is selected relative to previously selected soundtracks already playing. Thus while one or more soundtracks play, the user may add an additional soundtrack by selecting the new soundtrack and after a time interval remove the new soundtrack by deselecting (merely re-selecting) it.

Upon selecting the soundtracks and any effects, and corresponding time intervals, the audio mix is saved. In one embodiment, the newly created audio mixes are saved in an audio format file, for example the MIDI format audio file. The MIDI audio format has a time reference, with which start and stop times for corresponding soundtracks may be associated.

FIG. 3 illustrates an exemplary soundtrack data set 300 that is stored on the handset in one embodiment of the invention. The exemplary data set includes a plurality of sets of instrument, or some other melodic, soundtracks, for example 310 and 320 in FIG. 3. In the exemplary embodiment each instrument or melodic soundtrack has three variations 312, 314 and 316, but more generally there may be more or less. Only one variation, variation 322, of the second plurality of instrument sets is illustrated, but generally there are more. The instruments tracks could instead be some other distinct melodic soundtrack and/or variations thereon.

The exemplary soundtrack data set file 300 also includes a plurality of sound effect soundtracks 330 including an effect soundtrack 332, 334 and 336 for a corresponding one of the soundtracks 312, 314 and 316, respectively. Each of the sound effect tracks 332, 334 and 336 may be, for example, a reverberation 5 soundtrack. Alternatively there could be another set of effects, for example a corresponding echo track, (not illustrated) for each of the soundtracks 312, 314 and 316. Generally, there are also, in some embodiments, corresponding effects soundtracks for each of the other soundtracks 322, etc. In some embodiments, there are no effect soundtracks. More generally, each soundtrack of the soundtrack data set file 300 in FIG. 3 is a different soundtrack.

The exemplary soundtrack data set file 300 also includes a corresponding reference or base soundtrack 302. In one embodiment, there is a plurality of unique soundtrack data set files each having a corresponding base track, e.g., Jazz, Blues, Rock, Pop, etc., and corresponding instrument variation 10 soundtracks stored on the handset. Additional soundtrack data set files may be downloaded onto the device, for example for a fee or as part of a subscription.

In one embodiment, a polyphonic audio mix is created on the handset by entering reference data for corresponding soundtracks of a selected soundtrack data set file into an audio mix data reference file, for example by 20 selecting plural soundtracks at a user interface, as discussed above. The audio mix data reference file having soundtrack reference data is representative of the user defined polyphonic audio mix. In one embodiment, the audio mix data reference file is not in an audio file format.

The audio mix data reference file having the reference data is stored 25 on the handset as a distinct file, separately from the soundtrack data set files. The audio mix data reference file is itself preferably devoid of soundtrack data. Thus many audio mixes may be mixed and saved in the form of audio mix data

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reference files by the user without substantial memory usage, which is often limited on mobile communication handsets, since only the audio mix data reference file having the reference data is created and stored. In other embodiments, the audio mix data reference file includes copies of the soundtrack data, but this requires comparatively substantial memory for storage.

In FIG. 4, the audio mix data reference file 400 includes a file name field 410, one or more global sound file effect fields 420, for example Tempo and/or Key, and a plurality of soundtrack fields 430, 432, 434, etc. In embodiments where a base track is desired, the audio mix data reference file includes a base track field 450.

The file name field 410 stores file name data designated by the user for the corresponding user defined polyphonic audio file. The file name data may be entered by the user, for example upon completion of mixing the soundtrack.

The global sound effect reference field 420 stores global effect reference data, which is communicated to the synthesizer when the polyphonic audio mix is played. More than one global effect reference may be stored in the field 420, or alternatively multiple reference data fields may be provided for storing corresponding sound effect references. In one embodiment, the one or more sound effect fields provide the audio synthesizer with instructions for the sound effects that are to be played for the corresponding polyphonic audio mix.

The base track field 450 stores base track reference data, which references the base track, if any, associated with the corresponding polyphonic audio mix. In one embodiment, the base track field provides the audio synthesizer with instructions for which base track is to be played for the corresponding polyphonic audio mix.

The soundtrack reference fields 430, 432, etc. store soundtrack reference data, which references corresponding soundtracks associated with the